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Version: 3.4
Effective date: 04/02/2020
Previous Date: 11/10/2019

SAFETY DATA SHEET

FLOGARD MS6217 (CoolGard IN 105)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture FLOGARD MS6217 (CoolGard IN 105)

Version number 3.4

Revision date 04/02/2020

Supersedes date 11/10/2019

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Water-based corrosion inhibitor/deposit control agent

Uses advised against None known.

1.3. Details of the supplier of the safety data sheet

JV Process and Water Chemicals LLC

Address: Street V. Kadirov 10, Chirchik city,
Tashkent Region, Republic of Uzbekistan, 111727

Tel: +99871 209 10 40

Email address: info@pwch.uz

www.pwch.uz

1.4. Emergency telephone number

Multilingual emergency number (24/7)

Street V. Kadirov 10, Chirchik city,
Tashkent Region,
Republic of Uzbekistan, 111727

Tel: +99871 209 10 40

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 as amended

Physical hazards

Corrosive to metals Category 1 H290 - May be corrosive to metals.

Health hazards

Acute toxicity, oral Category 4 H302 - Harmful if swallowed.

Skin corrosion/irritation Category 1 H314 - Causes severe skin burns and eye damage.

Serious eye damage/eye irritation Category 1 H318 - Causes serious eye damage.

Environmental hazards

Hazardous to the aquatic environment, long-term aquatic hazard Category 2 H411 - Toxic to aquatic life with long lasting effects.

2.2. Label elements



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Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Phosphoric acid, Zinc sulphate

Hazard pictograms



Signal word Danger

Hazard statements

- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

- P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTRE/doctor.
- P390 Absorb spillage to prevent material-damage.

Storage Not available.

Disposal Not available.

Supplemental label information EUH208 - Contains Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

2.3. Other hazards The classification as corrosive is due to the extreme pH.

SECTION 3: Composition/information on ingredients

Mixtures

Chemical description Aqueous acidic solution of inorganic salt and polymer

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Phosphoric acid	10 - < 20	7664-38-2 231-633-2	01-2119485924-24	015-011-00-6	#
Classification:					B
Zinc sulphate	10 - < 20	7733-02-0 231-793-3	01-2119474684-27	030-006-00-9	
Classification:					Acute Tox. 4;H302, Eye Dam. 1;H318, Aquatic Acute 1;H400, Aquatic Chronic 1;H410
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1)	< 0,0015	55965-84-9 -	-	613-167-00-5	
Classification:					Acute Tox. 3;H301, Acute Tox. 2;H310, Skin Corr. 1C;H314, Skin Sens. 1A;H317, Eye Dam. 1;H318, Acute Tox. 2;H330, Aquatic Acute 1;H400(M=100), Aquatic Chronic 1;H410(M=100)

The classification of the above substance(s) is given, including the hazard class, category code and hazard statements which are assigned in accordance with their physicochemical, health and environmental hazards. Please refer to section 16 where the full text of each relevant H-statement is listed.



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SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move to fresh air.
Skin contact	Take off immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Eye contact	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Keep eyelids apart. Get medical attention immediately.
Ingestion	Rinse mouth. Do not give anything to eat or drink. Do not induce vomiting. Call a physician or poison control centre immediately.

4.2. Most important symptoms and effects, both acute and delayed

Corrosive effects.

4.3. Indication of any immediate medical attention and special treatment needed

Not available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Dry chemical, CO ₂ , water spray or regular foam.
Unsuitable extinguishing media	None.

5.2. Special hazards arising from the substance or mixture

Oxides of carbon, sulphur, and phosphorus evolved in fire.

5.3. Advice for firefighters

Special protective equipment for firefighters	Self contained breathing apparatus. (CEN : EN 137) Protective clothing (CEN : EN 469) Protective gloves (CEN : EN 659) Helmet (CEN : EN 443)
Special fire fighting procedures	Use standard firefighting procedures and consider the hazards of other involved materials. Prevent spillage and fire-fighting water from entering in public sewers or the immediate environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Wear protective clothing, gloves and safety goggles.
For emergency responders	Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

Prevent from entering sewers or the immediate environment.
Do not empty into drains, dispose of this material and its container to hazardous or special waste collection point.

6.3. Methods and material for containment and cleaning up

Absorb onto inert material and dispose of according to Hazardous Waste Regulations.
Remove small spills with plenty of water.

6.4. Reference to other sections

Please refer also to section no. 8 'Exposure controls' for further information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes.
Acidic.
Do not mix with alkaline material.



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7.2. Conditions for safe storage, including any incompatibilities Store containers closed when not in use.
 Store in dry, cool, well ventilated area.
 Contact with metals may release flammable hydrogen gas.
 Store in corrosive resistant container with a resistant inner liner.

7.3. Specific end use(s) Only for professional and industrial users

Shelf life 720 days

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value
Phosphoric acid (CAS 7664-38-2)	STEL	2 mg/m ³
	TWA	1 mg/m ³

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components	Type	Value
Phosphoric acid (CAS 7664-38-2)	STEL	2 mg/m ³
	TWA	1 mg/m ³

Biological limit values No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures Not available.

Derived no effect levels (DNELs)

Workers

Components	Value	Assessment factor	Notes
Phosphoric acid (CAS 7664-38-2)	Long-term, Local, Inhalation	1 mg/m ³	Repeated dose toxicity Repeated dose toxicity
	Long-term, Systemic, Inhalation	10,7 mg/m ³	
	Short-term, Local, Inhalation	2 mg/m ³	
Zinc sulphate (CAS 7733-02-0)	Long-term, Systemic, Dermal	8,3 mg/kg	1
	Long-term, Systemic, Inhalation	1 mg/m ³	1

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
Zinc sulphate (CAS 7733-02-0)	Freshwater	20,6 µg/l	1
	Marine water	6,1 µg/l	1
	Sediment (freshwater)	117,8 mg/kg	1
	Sediment (marine water)	56,5 mg/kg	1
	Soil	35,6 mg/kg	1
	STP	52 µg/l	100

8.2. Exposure controls

Appropriate engineering controls Adequate ventilation to maintain air contaminants below exposure limits.
 Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Splash proof chemical goggles.
 Face shield.
 CEN : EN 166

Skin protection

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- Hand protection	Gauntlet type neoprene gloves (Protection against unintentional short-term contact) Gauntlet type nitrile gloves (Protection against unintentional short-term contact) Gauntlet type rubber gloves (Protection against unintentional short-term contact) Coating thickness: 0.5 mm Penetration time: > 480 min CEN : EN 374-1/2/3/4; EN 420
- Other	Chemical resistant apron. CEN : EN ISO 13688; EN ISO 6529; EN 14605
Respiratory protection	In case of insufficient ventilation, use a breathing mask with filter type: B2-P2 CEN : EN 140; EN 14387
Thermal hazards	Not available.
Environmental exposure controls	Prevent from entering in public sewers or the immediate environment. Do not empty into drains, dispose of this material and its container to hazardous or special waste collection point.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties****Appearance****Colour** Colourless to yellow**Physical state** Liquid**Odour** Slight**Odour threshold** Not available.**pH (concentrated product)** 0,5**pH in aqueous solution** 1,8 (5% SOL.)**Melting point/freezing point** -14 °C**Initial boiling point and boiling range** 104 °C**Flash point** > 100 °C P-M(CC)**Evaporation rate** < 1 (Ether = 1)**Flammability (solid, gas)** Not applicable.**Upper/lower flammability or explosive limits****Flammability limit - lower (%)** Not available.**Flammability limit - upper (%)** Not available.**Vapour pressure** 18 mm Hg**Vapour pressure temp.** 21 °C**Vapour density** < 1 (Air = 1)**Relative density** 1,3**Relative density temperature** 21 °C**Solubility****Solubility (water)** 100 %**Partition coefficient (n-octanol/water)** Not available.**Auto-ignition temperature** Not applicable.**Decomposition temperature** Not available.**Viscosity** 25 cps**Viscosity temperature** 21 °C**Explosive properties** Not available.**Oxidising properties** Not available.



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9.2. Other information

Pour point	-11 °C
Shelf life	720 days
VOC	0 % (Estimated)

SECTION 10: Stability and reactivity

10.1. Reactivity	Metals. Bases, alkalies (organic).
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	Not applicable.
10.4. Conditions to avoid	Contact with metals may release flammable hydrogen gas.
10.5. Incompatible materials	Avoid contact with strong bases. Avoid contact with strong oxidisers.
10.6. Hazardous decomposition products	Oxides of carbon, sulphur, and phosphorus evolved in fire.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Product	Test Results
FLOGARD MS6217 (CoolGard IN 105) (Mixture)	Acute Dermal LD50 Rabbit: > 5000 mg/kg (Calculated according to GHS additivity formula) Acute Oral LD50 Rat: 1786 mg/kg (Calculated according to GHS additivity formula)
Components	Test Results
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1) (55965-84-9)	Acute Dermal LD50 Rabbit: 90 mg/kg Acute Inhalation LC50 Rat: 0,33 mg/l 4 hour Acute Oral LD50 Rat: 67 mg/kg
Phosphoric acid (7664-38-2)	Acute Dermal LD50 Rabbit: 2740 mg/kg Acute Oral LD50 Rat: 300 mg/kg
Zinc sulphate (7733-02-0)	Acute Dermal LD50 Rabbit: > 2000 mg/kg Acute Oral LD50 Rat: 1710 mg/kg

Acute toxicity	Harmful if swallowed.
Skin corrosion/irritation	Causes severe skin burns and eye damage.
Serious eye damage/irritation	Causes serious eye damage.
Respiratory or skin sensitisation	Based on available data, the classification criteria are not met.
Specific target organ toxicity - repeated exposure	Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure	Based on available data, the classification criteria are not met.
Carcinogenicity	Based on available data, the classification criteria are not met.
Germ cell mutagenicity	Based on available data, the classification criteria are not met.
Reproductive toxicity	Based on available data, the classification criteria are not met.

Information on likely routes of exposure

Ingestion	Causes digestive tract burns. Harmful if swallowed.
Inhalation	Prolonged or excessive inhalation may cause respiratory tract irritation.



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Skin contact	Causes severe skin burns. May cause an allergic skin reaction.
Eye contact	Causes serious eye damage.
Symptoms	Not available.
Aspiration hazard	Based on available data, the classification criteria are not met.
Mixture versus substance information	None known.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity No data available

12.2. Persistence and degradability

- COD (mgO2/g) 77 (calculated data)
- BOD 5 (mgO2/g) 2 (calculated data)
- BOD 28 (mgO2/g) 7 (calculated data)
- Closed Bottle Test (% Degradation in 28 days) 22 (calculated data)
- Zahn-Wellens Test (% Degradation in 28 days) 55 (calculated data)
- TOC (mg C/g) 30 (calculated data)

12.3. Bioaccumulative potential Not available.

Partition coefficient n-octanol/water (log Kow)

Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1) 0,49

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil Not available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects Heavy metals: Zn = 50,7 mg/g (calculated data)

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Contaminated packaging According to Hazardous Waste Regulations.

EWC (European Waste Code) recommendation : 15 01 10
 15 Waste packaging; absorbents, wiping cloths, filter materials and protective clothing not otherwise specified.
 15 01 Packaging (including separately collected municipal packaging waste).
 15 01 10 Packaging containing residues of or contaminated by dangerous substances.
 Depending on the origin and state of the waste, other EWC numbers may be applicable too.

Disposal methods/information According to Hazardous Waste Regulations.

EWC (European Waste Code) recommendation : 16 03 05
 16 Wastes not otherwise specified in the list.
 16 03 Off-specification batches and unused products.
 16 03 05 Organic wastes containing dangerous substances.
 Depending on the origin and state of the waste, other EWC numbers may be applicable too.

SECTION 14: Transport information

ADR

- 14.1. UN number** UN3264
- 14.2. UN proper shipping name** Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid, Zinc sulphate, Mixture)



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14.3. Transport hazard class(es)

Class 8
Subsidiary risk -
Tunnel restriction code (E)

14.4. Packing group II

14.5. Environmental hazards Yes

14.6. Special precautions Not available.
for user

RID

14.1. UN number UN3264

14.2. UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid, Zinc sulphate, Mixture)

14.3. Transport hazard class(es)

Class 8
Subsidiary risk -

14.4. Packing group II

14.5. Environmental hazards Yes

14.6. Special precautions Not available.
for user

ADN

14.1. UN number UN3264

14.2. UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid, Zinc sulphate, Mixture)

14.3. Transport hazard class(es)

Class 8
Subsidiary risk -

14.4. Packing group II

14.5. Environmental hazards Yes

14.6. Special precautions Not available.
for user

IATA

14.1. UN number UN3264

14.2. UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid, Zinc sulphate, Mixture)

14.3. Transport hazard class(es)

Class 8
Subsidiary risk -

14.4. Packing group II

14.5. Environmental hazards Yes

ERG Code Not available.

14.6. Special precautions Not available.
for user

IMDG

14.1. UN number UN3264

14.2. UN proper shipping name Corrosive liquid, acidic, inorganic, n.o.s. (Phosphoric acid, Zinc sulphate, Mixture)

14.3. Transport hazard class(es)

Class 8
Subsidiary risk -

14.4. Packing group II

14.5. Environmental hazards

Marine pollutant Yes

EmS F-A, S-B

14.6. Special precautions Not available.
for user



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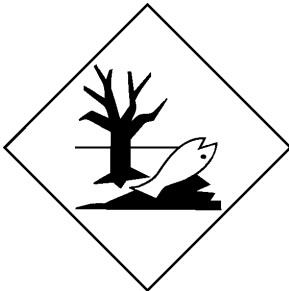
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

This substance/mixture is not intended to be transported in bulk.

ADN; ADR; IATA; IMDG; RID



Marine pollutant



SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Zinc sulphate (CAS 7733-02-0)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.



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Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-4-isothiazolin-3-one [EC no. 220-239-6] (3:1) (CAS 55965-84-9)

Zinc sulphate (CAS 7733-02-0)

National regulations Not available.

15.2. Chemical safety assessment Not available.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16: Other information

List of abbreviations

COD: Chemical Oxygen Demand
 EC-No: European Commission Number
 IATA: International Air Transport Association
 CAS: Chemical Abstract Service.
 CLP: Classification, Labeling and Packaging REGULATION (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures.
 CEN: European Committee for Standardization (Comité Européen de Normalisation).
 TWA: Time Weighted Average.
 STEL: Short-term Exposure Limit.
 LD50: Lethal Dose 50%.
 LC50: Lethal Concentration 50%.
 EC50: Effective Concentration 50%.
 NOEL: No observed effect level.
 BOD: Biochemical oxygen demand.
 TOC: Total Organic Carbon.
 ADR: European agreement concerning the international carriage of dangerous goods by road (Accord européen relatif transport des marchandises dangereuses par route).
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures).
 IMDG Code: International Maritime Dangerous Goods Code.
 RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement International concernant le transport de marchandises dangereuses par chemin de fer).
 Safety data sheets of raw materials.

References

Information on evaluation method leading to the classification of mixture

The physical, health and environmental hazards of this mixture are assessed by applying the classification criteria for each hazard class or differentiation in Parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008 (CLP).

Full text of any H-statements not written out in full under Sections 2 to 15

H290 May be corrosive to metals.
 H301 Toxic if swallowed.
 H302 Harmful if swallowed.
 H310 Fatal in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.



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Revision information	H330 Fatal if inhaled. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. Composition / Information on Ingredients: Disclosure Overrides SECTION 7: Handling and storage: 7.2. Conditions for safe storage, including any incompatibilities Physical & Chemical Properties: Multiple Properties SECTION 16: Other information: Further information
Training information	Provide training on safe handling while considering the type of application and exposure scenarios.
Based on EC Directive / Regulations	(EC) No 1907/2006 (REACH) (EC) No 1272/2008 (EU) 2015/830 (EU) No 1357/2014
Further information	Correction in Section: 3,16